

## Claims

1. A method for taking measurements in a mobile telecommunications system,  
5 the system comprising a network of a plurality of cells and at least one user equipment device, the method comprising, at the user equipment device:  
    scanning frequency bands to generate measurement data for signals received from cells of the network; and  
    when the signals received from cells of the network include more than one  
10 signal in a frequency band, generating measurement data for more than one signal in the frequency band.
2. A method according to claim 1 further comprising  
    identifying from the generated measurement data the cell which best meets a  
15 cell selection criteria;  
    determining whether the identified cell is suitable; and  
    when the identified cell is deemed unsuitable, identifying from the generated measurement data the cell with the next strongest signal at any frequency and  
determining whether the newly identified cell is suitable.  
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3. A method according to claim 1 further comprising determining whether the measurement data meets a predetermined criterion and storing the measurement data in an order relative to the meeting of the criterion.
- 25 4. A method according to claim 1 further comprising:  
    identifying from the generated measurement data the cell which best meets a cell selection criterion;  
    determining whether the identified cell is suitable; and  
    when the identified cell is deemed unsuitable, re-initiating the scanning step  
30 with the omission from the scan of the frequency band of the cell previously identified as the cell which best meets a cell selection criterion.

5. Apparatus for taking measurements in a mobile telecommunications system, the system comprising a network of a plurality of cells and at least one user equipment device, the apparatus comprising a processor and memory, the apparatus  
5 being arranged to carry out the following steps:

scanning frequency bands to generate measurement data for signals received from cells of the network; and

when the signals received from cells of the network include more than one signal in a frequency band, generating measurement data for more than one signal in  
10 the frequency band.

6. Apparatus according to claim 5 the apparatus being arranged to carry out the following further steps:

identifying from the generated measurement data the cell which best meets a  
15 cell selection criteria;

determining whether the identified cell is suitable; and

when the identified cell is deemed unsuitable, identifying from the generated measurement data the cell with the next strongest signal at any frequency and repeating the cell connection establishment attempt.  
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7. Apparatus according to claim 5 the apparatus being arranged to carry out the following further steps:

identifying from the generated measurement data the cell which best meets a cell selection criterion;

25 determining whether the identified cell is suitable; and

when the identified cell is deemed unsuitable, re-initiating the scanning step with the omission from the scan of the cell previously identified as the cell which best meets a cell selection criterion.